The paper is illustrated by three plates, the first giving the sea-level distribution of pressure and the wind directions all over India, the second the distribution of pressure at a height of 10,000 feet, and the third the curves of temperature decrement on ascending, both as given by observation in Glaisher's balloon ascents, and as computed on the hypothesis of adiabatic convection.

II. "Evaporation and Dissociation. Part V. A Study of the Thermal Properties of Methyl Alcohol." By WILLIAM RAMSAY, Ph.D., and SYDNEY YOUNG, D.Sc. Communicated by Professor G. G. STOKES, D.C.L., P.R.S. Received January 6, 1887.

(Abstract.)

This is a continuation of the investigation in which the authors are engaged. The measurements include the expansion of the liquid, the pressure of the vapour, and the compressibility of the substance in the gaseous state; and from these are deduced the densities of the saturated vapour and the heats of vaporisation. The total range of temperature is from $-15°$ to $+240°$; the range of pressure, from 11 mm. to 60,000 mm. The conclusions announced in their previous papers are supported by these measurements. The apparent critical temperature is 240·0°, and the critical pressure about 59,700 mm.

III. "Further Discussion of the Sun-Spot Observations made at South Kensington." By J. NORMAN LOCKYER, F.R.S. Received January 8, 1887.

In papers communicated to the Royal Society, and printed in the 'Proceedings' (vol. 31, pp. 72 and 348; vol. 32, p. 203; and vol. 33, p. 154) the sun-spot observations made at South Kensington since 1879 have been to some extent discussed.

In the last paper communicated to the Society, in May, 1886, I discussed the results obtained by the reduction of the observations of the most widened lines in the region F to *b* for the whole number of observations (700) made from November, 1879, to August, 1885.

In the latter paper it was shown that as we pass from the minimum to the maximum period included in the years named, the lines of known terrestrial elements disappear, their places being taken by lines which do not appear in any maps or tables of spectral lines. It was pointed out that such a result might be explained on the supposition that since the solar atmosphere is quietest and coolest at the